AMENDMENT AND RESPONSE UNDER 37 CFR § 1.116 - EXPEDITED PROCEDURE

Serial Number: 10/789,931

Filing Date: February 27, 2004

Filling Date. February 27, 2004

Page 2 Dkt: 303.881US1

MICROSTRIP LINE DIELECTRIC OVERLAY

IN THE CLAIMS

Please amend the claims as follows.

1. (Currently Amended) A printed circuit board, comprising:

a substrate having a dielectric constant different from the dielectric constant of free

space;

at least two microstrip lines routed adjacent to one another on a surface of the substrate,

each microstrip separated from a ground plane of the printed circuit board by the substrate; and

a dielectric coating applied to at least one of the at least two microstrip lines such that the

dielectric constant of the dielectric coating differs from the dielectric constant of free space, and

such that the dielectric coating is applied to the at least one microstrip line in a thickness at least

half the thickness of the substrate separating the microstrip line from the ground plane,

wherein the dielectric coating comprises a coating material applied over the at least one

microstrip line in a thickness greater than a thickness of the coating material in at least one other

area of the substrate having the coating material applied thereto.

2. (Cancelled)

3. (Original) The printed circuit board of claim 1, further comprising one or more signal

sources driving the at least two microstrip lines.

4. (Previously Presented) The printed circuit board of claim 1, further comprising one or

more connection points for driving signals onto or for receiving signals from at least one of the at

least two microstrip lines.

5. (Cancelled)

MICROSTRIP LINE DIELECTRIC OVERLAY

Dkt: 303.881US1

(Previously Presented) The printed circuit board of claim 1, wherein the dielectric 6. constant of the dielectric coating is approximately the same as the dielectric constant of the printed circuit board.

7. (Previously Presented) A memory module, comprising:

a printed circuit board;

at least one memory integrated circuit mounted to the printed circuit board;

at least two microstrip lines routed on a surface of the printed circuit board, each microstrip line separated from a ground plane of the printed circuit board substantially by a thickness of printed circuit board material; and

a dielectric coating applied to at least one of the microstrip lines such that the dielectric constant of the dielectric coating differs from the dielectric constant of free space, and such that the dielectric coating is applied to the at least one microstrip line in a thickness at least half the thickness of the printed circuit board material separating the microstrip line from the ground plane;

wherein the dielectric coating comprises a coating material applied over the at least one microstrip line in a thickness greater than a thickness of the coating material in at least one area of the substrate having the coating material applied thereto.

- 8. (Original) The memory module of claim 7, further comprising at least one connection point for electrically connecting the memory module to other circuitry.
- 9. (Original) The memory module of claim 7, wherein the dielectric coating comprises a printed circuit board conformal coating material.
- 10. (Cancelled)
- (Original) The memory module of claim 7, wherein the dielectric coating comprises a 11. material having a dielectric constant greater than one.

12. (Previously Presented) The memory module of claim 7, wherein the dielectric constant

of the dielectric coating is approximately equal to the dielectric constant of the printed circuit

board.

13. (Previously Presented) A microstrip line assembly, comprising:

a first microstrip line routed on a substrate, the substrate separating the first microstrip

line from a ground plane;

a second microstrip line routed on the substrate; and

a dielectric coating applied to the first microstrip line such that the dielectric coating has

a dielectric constant different from the dielectric constant of free space, and such that the

dielectric coating is applied to the first microstrip line in a thickness at least half the thickness of

the substrate separating the microstrip line from the ground plane;

wherein the dielectric coating comprises a coating material applied over the first

microstrip line in a thickness greater than a thickness of the coating material in at least one area

of the substrate having the coating material applied thereto.

(Original) The microstrip line assembly of claim 13, wherein the substrate comprises a 14.

printed circuit board comprised of fiberglass, and having a dielectric constant of between four

and five.

15. (Previously Presented) The microstrip line assembly of claim 13, wherein the dielectric

constant of the dielectric coating is approximately equal to the dielectric constant of the

substrate.

(Cancelled) 16.

(Previously Presented) The microstrip line assembly of claim 13, wherein the dielectric 17.

coating is applied in a thickness designed to approximately minimize propagation delay

difference between the first and second microstrip lines when the signal phase of the first and

second microstrip lines is varied.

18. (Previously Presented) A method of reducing propagation delay variation in a microstrip line, comprising:

applying a dielectric coating to at least a first microstrip line routed near a second microstrip line, wherein the first microstrip line is separated from a ground plane by a substrate and such that the dielectric coating is applied to the at least a first microstrip line in a thickness equal to at least half the thickness of the substrate separating the at least a first microstrip line from the ground plane;

wherein the dielectric coating is applied by applying a coating material over the at least one microstrip line in a thickness greater than a thickness of the conformal coating material in at least one area of the substrate having the coating material applied thereto.

19-34. (Cancelled)